Google's Claim Construction Presentation

Kewazinga Corp. v. Google LLC

Case No. 1:20-cv-01106-LGS

February 16, 2021

Claim Construction Disputes

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

(Slides 14–52)

"mosaicing"

'325 Patent, claims 1, 5, 6

(Slides 53–65)

Claim Construction Captures The Scope Of The Actual Invention

"[T]he claim construction process entails more than viewing the claim language in isolation. Claim language must always be read in view of the written description."

"[W]e strive to capture the scope of the **actual invention**."

Retractable Techs., Inc. v. Becton, Dickinson & Co., 653 F.3d 1296, 1305 (Fed. Cir. 2011)

"'Repeated derogatory statements' [in the specification] can indicate that the criticized technologies were not intended to be within the scope of the claims."

UltimatePointer, L.L.C. v. Nintendo Co., Ltd., 816 F.3d 816, 822 (Fed. Cir. 2016)

To Capture The Scope Of The Invention, Courts Rely On The Intrinsic Evidence

Extrinsic evidence, such as litigation-inspired expert testimony, "is less significant than the intrinsic record."

Phillips v. AWH Corp.,
415 F.3d 1303, 1317 (Fed. Cir. 2005)

The situations in which expert testimony should be relied upon "will rarely, if ever, occur."

Vitronics Corp. v. Conceptronic, Inc.,
90 F.3d 1576, 1582 (Fed. Cir. 1996)

Patents Serve A Public Notice Function

"The [patent] monopoly is a property right; and like any property right, its boundaries should be clear."

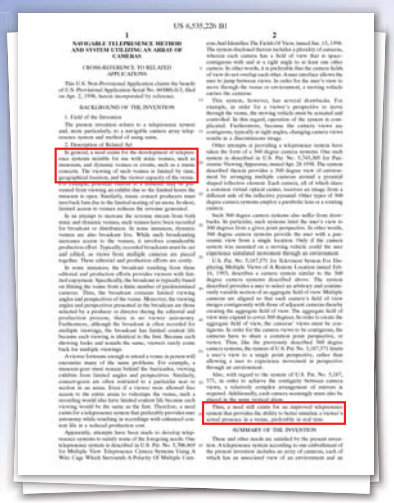
"A patent holder should know what he owns, and the public should know what he does not."

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.,
535 U.S. 722, 730–31 (2002)

"Notice permits other parties to avoid actions which infringe the patent and to design around the patent."

London v. Carson Pirie Scott & Co.,
946 F. 2d 1534 (Fed. Cir. 1991)

Kewazinga's Inventions Were About A Telepresence System To Simulate A Viewer's Presence In A Venue



'226 Patent

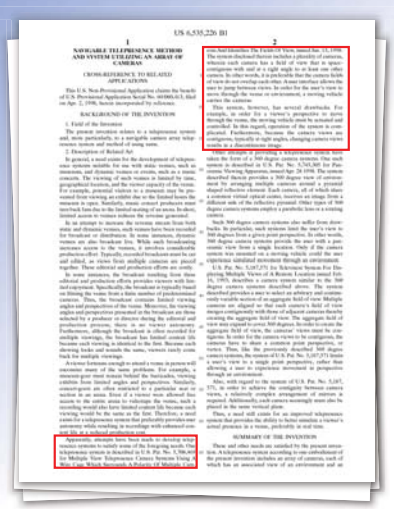
> In general, a need exists for the development of telepresence systems suitable for use with static venues, such as museums, and dynamic venues or events, such as a music concerts. The viewing of such venues is limited by time, geographical location, and the viewer capacity of the venue.

'226 Patent at 1:18–22

> Thus, a need still exists for an improved telepresence system that provides the ability to better simulate a viewer's actual presence in a venue, preferably in real time.

'226 Patent at 2:59–61

Kewazinga's Patents Disparage Other Systems



'226 Patent

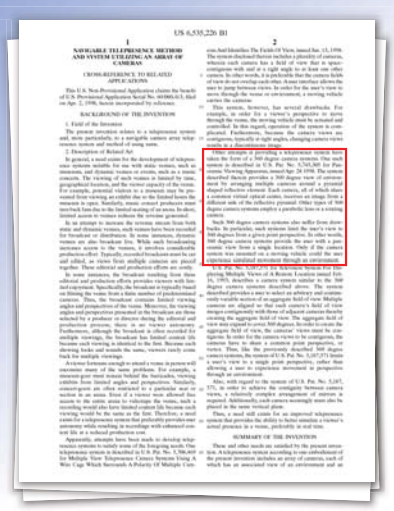
Apparently, attempts have been made to develop telepresence systems to satisfy some of the foregoing needs. One telepresence system is described in U.S. Pat. No. 5,708,469 for Multiple View Telepresence Camera Systems Using A Wire Cage Which Surrounds A Polarity Of Multiple Cameras And Identifies The Fields Of View, issued Jan. 13, 1998. The system disclosed therein includes a plurality of cameras, wherein each camera has a field of view that is space-contiguous with and at a right angle to at least one other camera. In other words, it is preferable that the camera fields of view do not overlap each other. A user interface allows the user to jump between views. In order for the user's view to move through the venue or environment, a moving vehicle carries the cameras.

'226 Patent at 1:63–2:9

This system, however, has several drawbacks. For example, in order for a viewer's perspective to move through the venue, the moving vehicle must be actuated and controlled. In this regard, operation of the system is complicated. Furthermore, because the camera views are contiguous, typically at right angles, changing camera views results in a discontinuous image.

'226 Patent at 2:10–16

Kewazinga's Patents Disparage Other Systems



'226 Patent

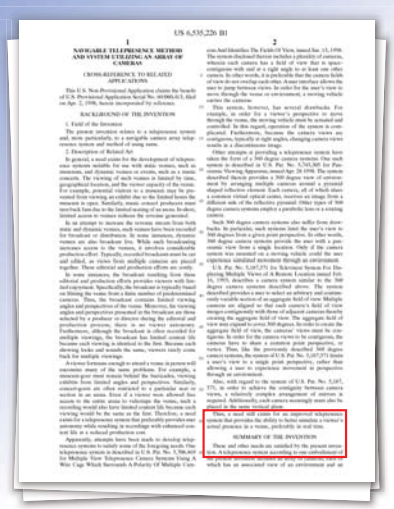
Other attempts at providing a telepresence system have taken the form of a 360 degree camera systems. One such system is described in U.S. Pat. No. 5,745,305 for Panoramic Viewing Apparatus, issued Apr. 28 1998. The system described therein provides a 360 degree view of environment by arranging multiple cameras around a pyramid shaped reflective element. Each camera, all of which share a common virtual optical center, receives an image from a different side of the reflective pyramid. Other types of 360 degree camera systems employ a parabolic lens or a rotating camera.

'226 Patent at 2:17–27

Such 360 degree camera systems also suffer from drawbacks. In particular, such systems limit the user's view to 360 degrees from a given point perspective. In other words, 360 degree camera systems provide the user with a panoramic view from a single location. Only if the camera system was mounted on a moving vehicle could the user experience simulated movement through an environment.

'226 Patent at 2:28–34

"We Strive To Capture The Scope Of The Actual Invention"



'226 Patent

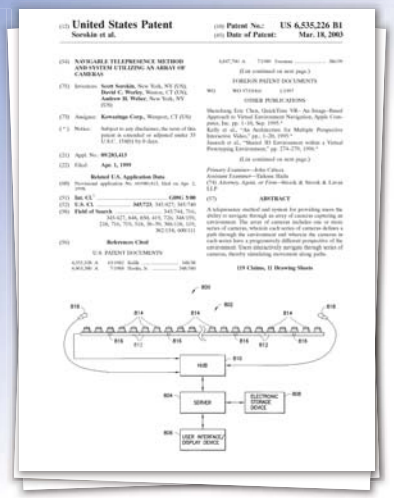
Thus, a need still exists for an improved telepresence system that provides the ability to better simulate a viewer's actual presence in a venue, preferably in real time.

SUMMARY OF THE INVENTION

These and other needs are satisfied by the present invention. A telepresence system according to one embodiment of

'226 Patent at 2:59–65

"We Strive To Capture The Scope Of The Actual Invention"



'226 Patent

SUMMARY OF THE INVENTION

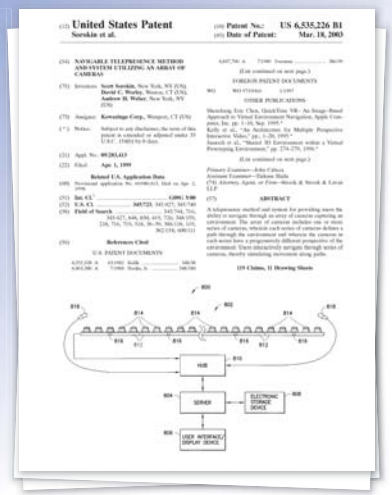
These and other needs are satisfied by the present invention. A telepresence system according to one embodiment of the present invention includes an array of cameras, each of which has an associated view of an environment and an associated output representing the view. The system also

'226 Patent at 2:63–3:1

arrays of microcameras. The cameras are on rails, with each rail holding a plurality of cameras. These cameras, each locked in a fixed relation to every adjacent camera on the array and dispersed dimensionally in a given environment, enable remote viewers to navigate through such environment with the same spatial and visual cues (the changing perspective lines, the moving light reflections and shadows) that characterize an actual in-environment transit.

'226 Patent at 3:57–65

"We Strive To Capture The Scope Of The Actual Invention"



United States Patent
Sorokin et al.

Patent No.: US 6,535,226 B1
Date of Patent: Mar. 18, 2003

NAVIGABLE TELEPRESENCE METHOD AND SYSTEM UTILIZING AN ARRAY OF CAMERAS

ABSTRACT

19 Claims, 11 Drawing Sheets

'226 Patent

perspective from camera to camera. Rather than relying, per se, on physically moving a microcamera through space, the system uses the multiplicity of positioned microcameras to move the viewer's perspective from microcamera node to adjacent microcamera node in a way that provides the viewer with a sequential visual and acoustical path throughout the extent of the array. This allows the viewer to fluidly

'226 Patent at 4:12–18

It is to be understood that the array **10** provides several advantages. For example, because the array **10** employs a series of cameras **14**, no individual camera, or the entire array **10** for that matter, need be moved in order to obtain a seamless view of the environment. Instead, the user navigates through the array **10**, which is strategically placed through and around the physical environment to be viewed.

'226 Patent at 6:26–32

The Figures Consistently Show These Multiple Cameras Strategically Positioned Through An Environment

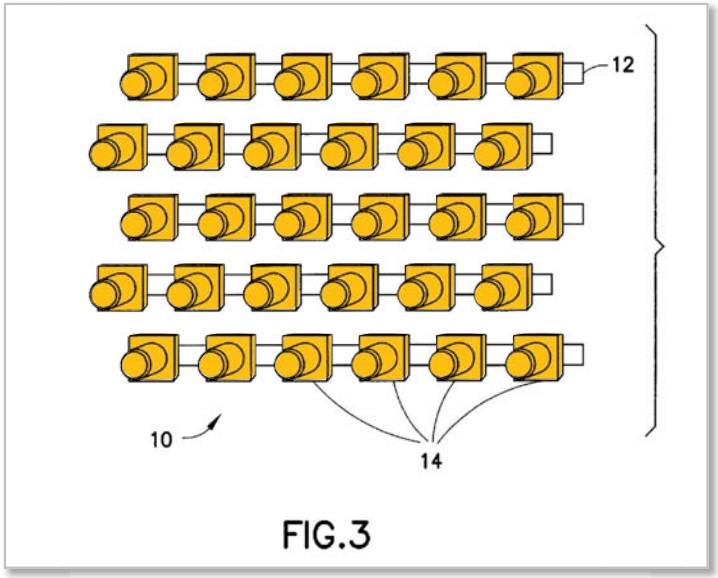


FIG.3

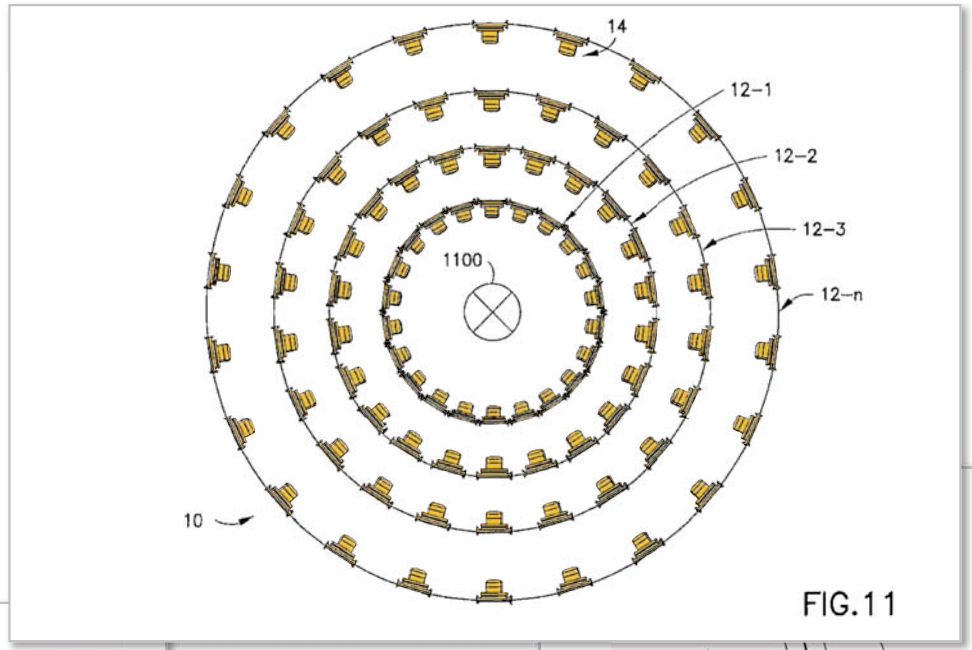


FIG.11

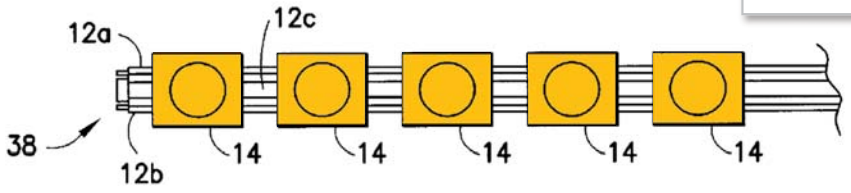


FIG.2e

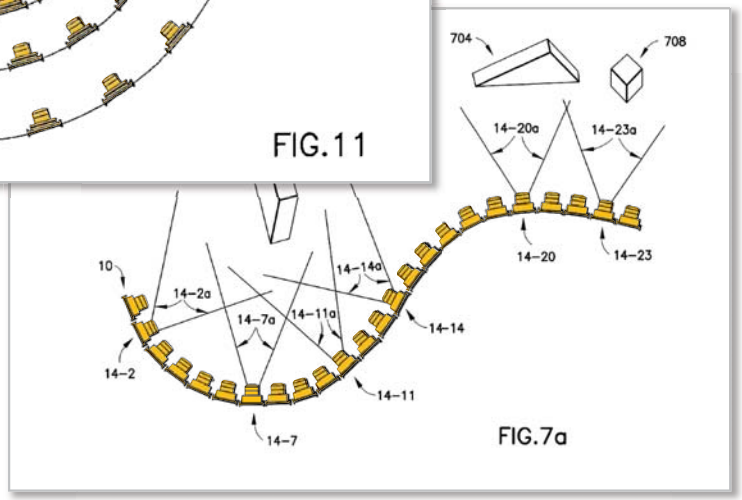


FIG.7a

The Patents Describe Techniques For Mixing Images, Such As "Mosaicing"

'325 Patent

the environment. In another embodiment, a telepresence system includes various techniques for mixing images of cameras along each path, such as, mosaicing and tweening, for effectuating seamless motion along such paths.

'325 Patent Abstract

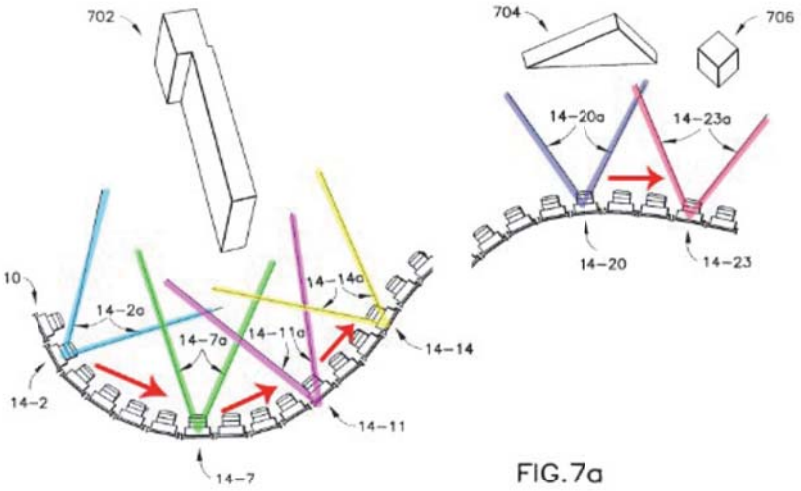


FIG.7a

'325 Patent Figs. 7a, 7b-7g (modified and annotated) (showing the views from exemplar cameras).

Google Reply CC Brief at 19

Claim Construction Disputes

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

(Slides 14–52)

"mosaicing"

'325 Patent, claims 1, 5, 6

(Slides 53–65)

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

54. A method of providing users with views of a remote environment, the method comprising:

receiving electronic images of the environment captured from an array of cameras, the array including at least a

receiving electronic images of the environment captured from an array of cameras, the array including at least a first series of cameras defining a first path through the environment, the first series of cameras having progressively different perspectives of the environment along the first path;

'226 Patent, Claim 55

ment along the first path.

55. The method of claim 54 wherein the receiving images including receiving images from a second series of cameras in the array, the second series defining a second path through the environment, the second series of cameras having progressively different perspectives on the environment along the second path and wherein the method further includes:

receiving a second input from a second user interface device associated with a second user, the second input indicating movement through the environment along the second path;

providing to the second user images from the second series of cameras in sequence along the second path, thereby simulating movement by the second user through the environment along the second path, independently of simulating movement by the first user through the environment.

1. A telepresence system for providing a first user with a first display of an environment and a second user with a second display of the environment, the system comprising:

an array of cameras, each camera having an associated

1. A telepresence system for providing a first user with a first display of an environment and a second user with a second display of the environment, the system comprising:

an array of cameras, each camera having an associated view of the environment and an associated camera output representing the associated view, the array including at least one camera path wherein each path is defined by a series of cameras having progressively different perspectives of the environment;

'325 Patent, Claim 1

in the first path in accordance with the received first user inputs by sequentially mosaicing the selected outputs of cameras in the first path and

interpret received second inputs and select outputs of cameras in the second path independently of the first inputs, mix the outputs of cameras in the second path in accordance with the received second user inputs by sequentially mosaicing the selected outputs of cameras in the second path, thereby allowing the first user and second user to navigate simultaneously and independently through the array.

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

Proposed constructions

Google

"a set of multiple cameras, each fixed in relation to each other"

Kewazinga

No construction necessary, or

"a camera configuration wherein the configuration can be created over time by moving cameras"

Microsoft Court's Construction

"a set of multiple cameras, each fixed in relation to each other"

Kewazinga Is Trying To Re-Litigate The *Microsoft* Construction

Kewazinga's proposed construction in the *Microsoft* case

"a configuration of cameras, where such configuration can include movable cameras and reusing a camera in multiple locations"

Kewazinga's proposed construction in this case

"a camera configuration wherein the configuration can be created over time by moving cameras"

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

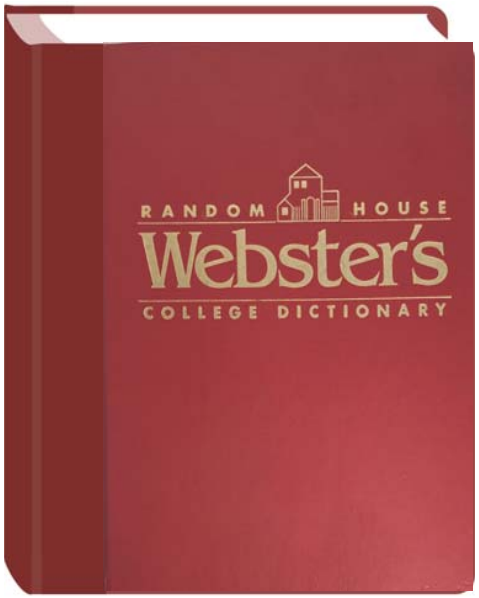
Google	Proposed constructions	Kewazinga
"a set of multiple cameras, each fixed in relation to each other"		No construction necessary, or "a camera configuration wherein the configuration can be created over time by moving cameras"

Microsoft Court's Construction

"a set of multiple cameras, each fixed in relation to each other"

"a set of multiple cameras"

The *Microsoft* Court's Construction Is Consistent With The Plain Meaning

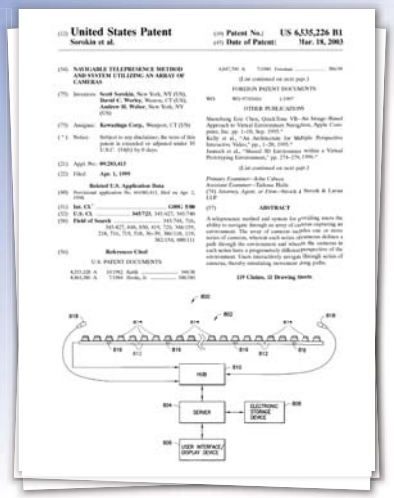


Random House Webster's College Dictionary (1991)

ar•ray (ə rā′), *v.*, **-rayed, -ray•ing,** *n.* —*v.t.* **1.** to place in proper or desired order; marshal: *to array troops for battle.* **2.** to clothe with garments, esp. of an ornamental kind. —*n.* **3.** order or arrangement, as of troops drawn up for battle. **4.** military force, esp. a body of troops. **5.** a large and impressive grouping or organization: *an array of facts.* **6.** regular order or arrangement: *an array of figures.* **7.** a large group, number, or quantity of people or things. **8.** attire; dress: *in fine array.* **9.** a functional arrangement of interrelated objects or items of equipment: *an array of solar cells.* **10.** *Math., Statistics.* **a.** an arrangement of a series of terms according to value, as from largest to smallest. **b.** an arrangement of a series of terms in some geometric pattern, as in a matrix. [1250–1300; ME < AF *arayer,* OF *are(y)er* < VL **arrēdāre* to prepare = L *ar-* AR- + VL **-rēdāre* < Gmc; see CORODY] —**ar•ray′er,** *n.*

Ex. H to Kewazinga's Opening Claim Construction Brief

The Claim Language Confirms That "Array" Includes Multiple



'226 Patent

54. A method of providing users with views of a remote environment, the method comprising:

receiving electronic images of the environment captured from an array of cameras, the array including at least a first series of cameras defining a first path through the environment, the first series of cameras having progressively different perspectives of the environment along the first path;

receiving a first input from a first user interface device associated with a first user, the first input indicating movement through the environment along the first path;

providing to the first user images from the first series of cameras in sequence along the first path, thereby simulating movement by the first user through the environment along the first path.

'226 Patent, Claim 54

Every Disclosed Embodiment Depicts That The "Array" Includes A Set Of Multiple Cameras

'325 Patent

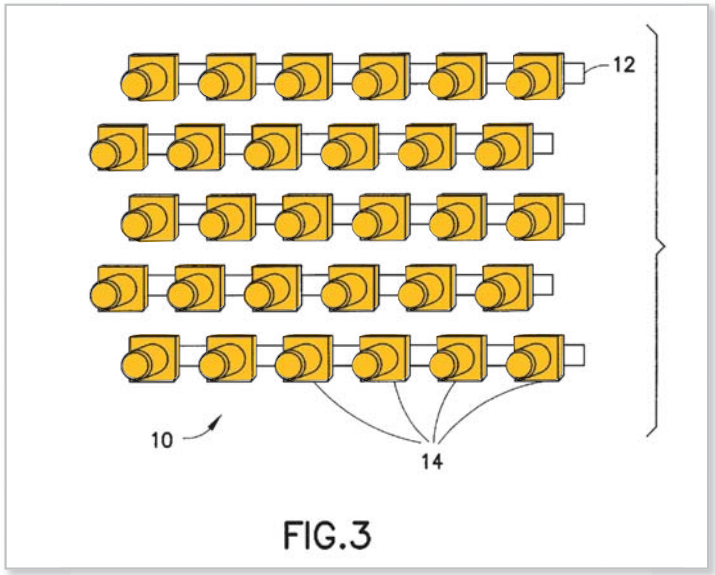


FIG.3

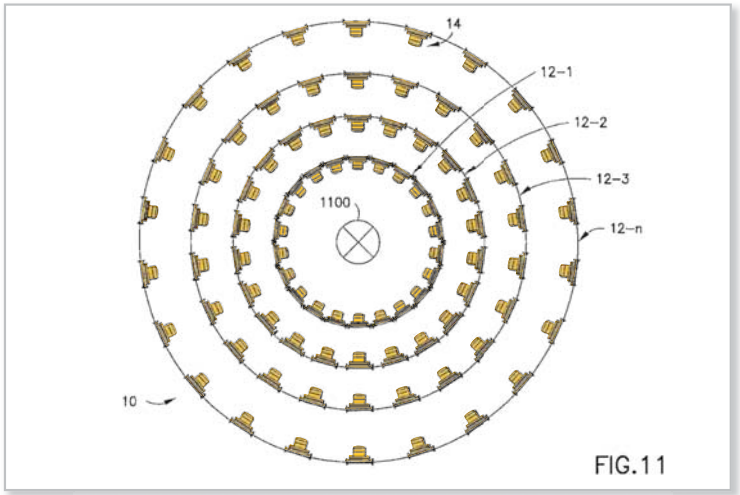


FIG.11

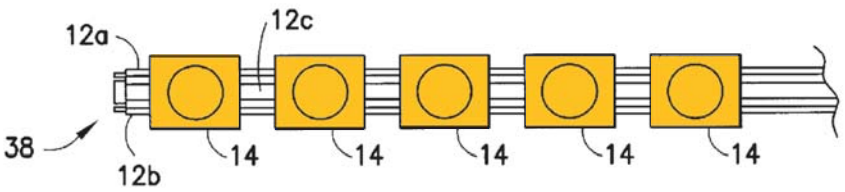


FIG.2e

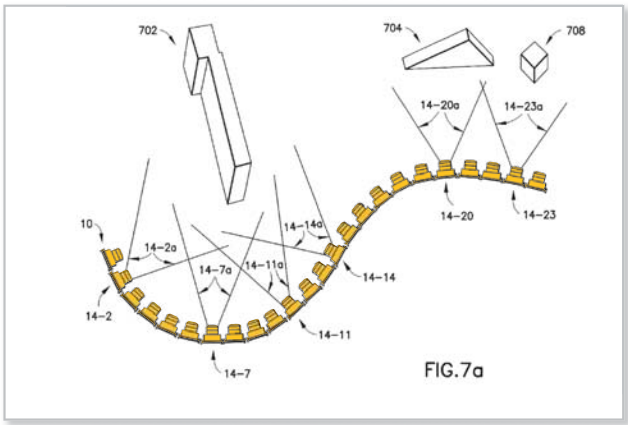
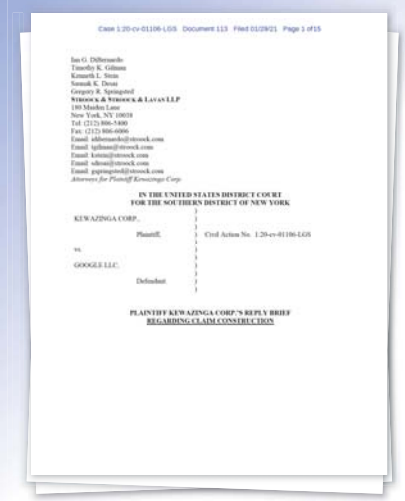


FIG.7a

"fixed in relation to each other"

Kewazinga Asserts That It Did Not Propose "Fixed In Relation To Each Other" In The *Microsoft* Case



IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

KEWAZINGA CORP.,

Plaintiff,

Civil Action No. 1:20-cv-01106-LGS

vs.

GOOGLE LLC,

Defendant.

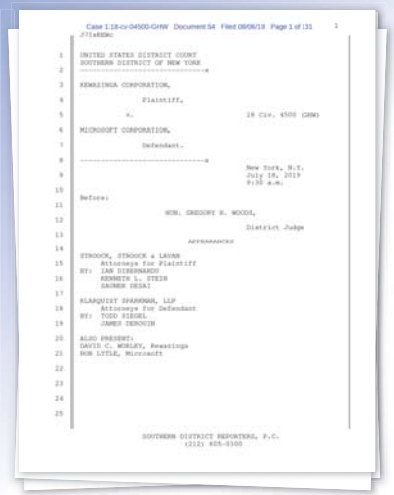
PLAINTIFF KEWAZINGA CORP.'S REPLY BRIEF REGARDING CLAIM CONSTRUCTION

Kewazinga's Reply Brief

> Although Google proposes the *Microsoft* court's construction for "array of cameras," it has potentially problematic ambiguities that should be resolved in this case. The *Microsoft* court's construction—including the phrase "fixed in relation to each other"—was not proposed by either party in that case and, as a result, Kewazinga did not have the opportunity to explain these ambiguities. Because Google proposed that construction here, Kewazinga identified several

Reply Br. at 2 (Dkt. 113)

Kewazinga Is Trying To Overturn The *Microsoft* Court's Construction



Kewazinga v. Microsoft

Claim Construction Hearing Transcript

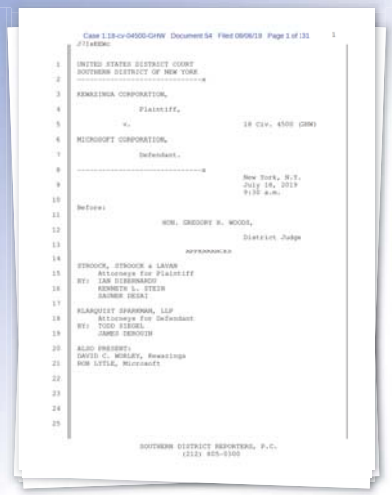
(18-cv-4500-GHW, Dkt. 54)

- At the claim construction hearing in *Microsoft*, Kewazinga specifically argued against the "fixed" aspect of the construction.

> His original declaration, paragraph 42. Again, quoting, One of ordinary skill in the art would understand the invention as encompassing navigating stored images captured from either fixed cameras or cameras that were moved or reused. Whether the cameras are fixed is immaterial to the invention and not required by the phrase array of cameras.

Transcript at 23:8–13 (argument of Kewazinga's counsel)

The Kewazinga Inventor Confirmed That Cameras Are "Fixed In Relation To Each Other" In The *Microsoft* Case



Kewazinga v. Microsoft

Claim Construction Hearing Transcript

(18-cv-4500-GHW, Dkt. 54)

MR. WORLEY: I'm sorry. The array doesn't have to be fixed. The array can be moving. What has to be fixed are the cameras in relation to each other.

David Worley, Kewazinga inventor, at 125:19–21

US006522325B1

(12) **United States Patent**
Sorokin et al.

(10) **Patent No.: US 6,522,325 B1**
(45) **Date of Patent: Feb. 18, 2003**

(54) **NAVIGABLE TELEPRESENCE METHOD AND SYSTEM UTILIZING AN ARRAY OF CAMERAS**

(75) Inventors: **Scott Sorokin**, New York, NY (US); **David C. Worley**, Weston, CT (US); **Andrew H. Weber**, New York, NY

FOREIGN PATENT DOCUMENTS

WO WO 97/03416 1/1997

OTHER PUBLICATIONS

Ackerman, R., "New Display Advances Brighten Situational Awareness Picture," Signal Magazine, Aug. 1998 [Joint

Inventors: **Scott Sorokin**, New York, NY (US); **David C. Worley**, Weston, CT (US); **Andrew H. Weber**, New York, NY (US)

'325 Patent

US006535226B1

(12) **United States Patent**
Sorokin et al.

(10) **Patent No.: US 6,535,226 B1**
(45) **Date of Patent: Mar. 18, 2003**

(54) **NAVIGABLE TELEPRESENCE METHOD AND SYSTEM UTILIZING AN ARRAY OF CAMERAS**

4,847,700 A 7/1989 Freeman 386/99

(List continued on next page.)

(75) Inventors: **Scott Sorokin**, New York, NY (US); **David C. Worley**, Weston, CT (US); **Andrew H. Weber**, New York, NY

FOREIGN PATENT DOCUMENTS

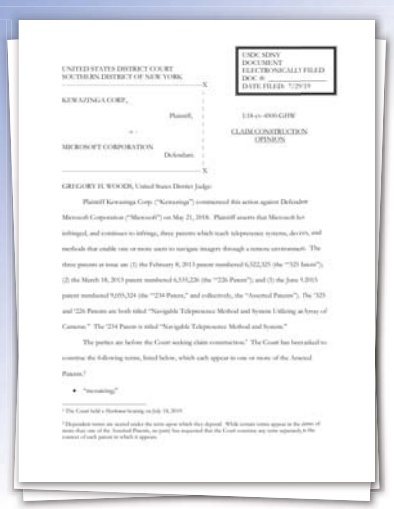
WO WO 97/03416 1/1997

OTHER PUBLICATIONS

Inventors: **Scott Sorokin**, New York, NY (US); **David C. Worley**, Weston, CT (US); **Andrew H. Weber**, New York, NY (US)

'226 Patent

The *Microsoft* Court Correctly Decided This Issue



UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

KEWAZINGA CORP.,

Plaintiff,

- v -

MICROSOFT CORPORATION

Defendant.

CLAIM CONSTRUCTION OPINION

GREGORY H. WOODS, United States District Judge:

Plaintiff Kewazinga Corp. ("Kewazinga") commenced this action against Defendant Microsoft Corporation ("Microsoft") on May 21, 2018. Plaintiff asserts that Microsoft has infringed, and continues to infringe, three patents which teach telepresence systems, devices, and methods that enable one or more users to navigate imagery through a remote environment. The three patents at issue are: (1) the February 8, 2013 patent numbered 8,522,325 (the "'325 Patent"); (2) the March 10, 2015 patent numbered 8,555,226 (the "'226 Patent"); and (3) the June 9, 2015 patent numbered 9,055,324 (the "'234 Patent," and collectively, the "Asserted Patents"). The '325 and '226 Patents are both titled "Navigable Telepresence Method and System Utilizing an Array of Cameras." The '234 Patent is titled "Navigable Telepresence Method and System."

The parties are before the Court seeking claim construction.[1] The Court has been asked to construe the following terms, listed below, which each appear in one or more of the Asserted Patents:[2]

- "navigating"

[1] The Court held a Markman hearing on July 18, 2019.

[2] Dependent terms are stated under the term upon which they depend. While certain terms appear in the claims of more than one of the Asserted Patents, no party has requested that the Court construe any term separately in the context of each patent in which it appears.

Microsoft Opinion

Br. at 14-15. In all of the multitude of configurations contemplated in the patents, however, the cameras in each array are always fixed in geometric relation to each other. As discussed below, the fixed geometric relationship between the cameras within an array is crucial to permitting users to navigate the environment captured by that array.

Microsoft Opinion at 28

Every Disclosed Embodiment Depicts That Each Camera In The "Array" Is Fixed In Relation To The Other Cameras

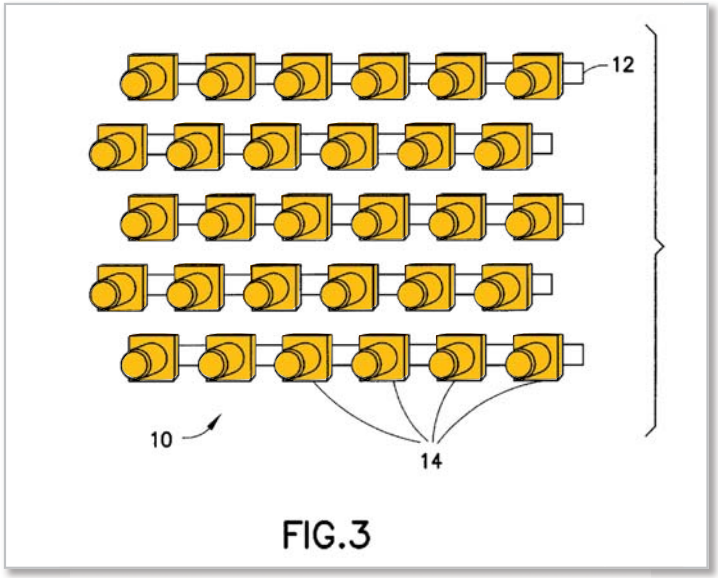


FIG.3

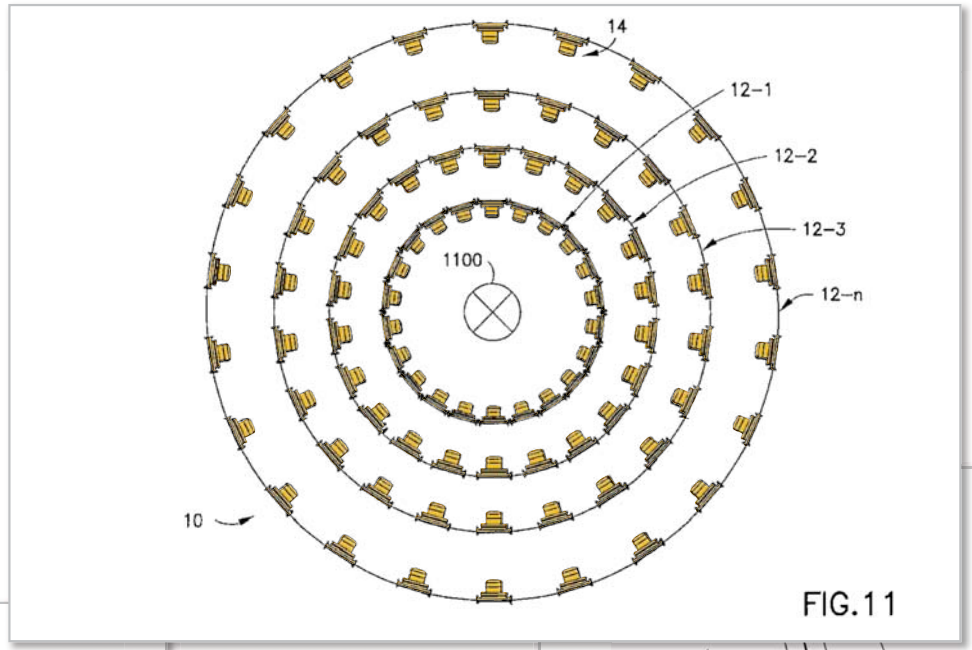


FIG.11

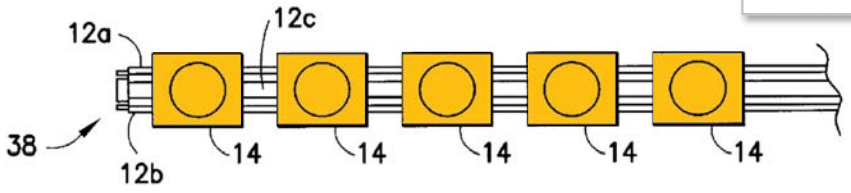


FIG.2e

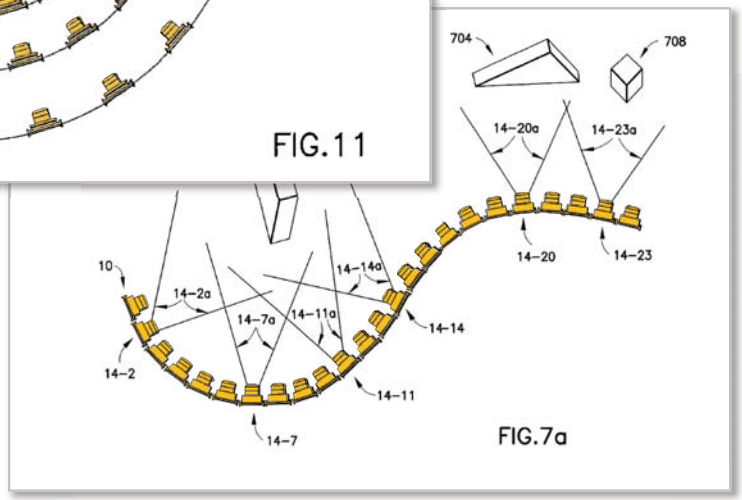


FIG.7a

As The *Microsoft* Court Already Held, The Relationship Between Cameras In The Array Is Determined Before Image Capture

- Kewazinga argues that "fixed" is ambiguous because "the relationship between cameras" in an array does not need to "be predetermined or known prior to image capture."

- Again, the *Microsoft* court **rejected** that very argument.

Kewazinga Is Trying To Overturn The *Microsoft* Construction By Arguing That An "Array" Can Be Any Camera, Anywhere, At Any Time

Jeffrey Lubin

Kewazinga Expert

Q. So in your opinion, two cameras ***at any point in time*** could be an array of cameras if they have a known relationship to one another?

A. As long as they are—known relationship, yeah.

Lubin Dep. (Dkt. 112-4) at 182:4–10

<u>Kewazinga thus argues</u>: "[I]f 'fixed in relation to each other' is understood to require that the relationship between cameras be predetermined or known ***prior to image capture***, Google's proposal would be contradicted by the Asserted Patents."

Kewazinga Opening Br. (Dkt. 110) at 24 (citing Lubin Decl. and Fig. 11)

Kewazinga Is Trying To Overturn The *Microsoft* Construction

Jeffrey Lubin

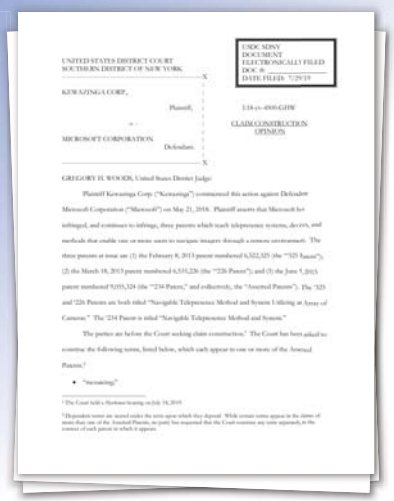
Kewazinga Expert

Q. …Is camera one at location A on December 1st and camera two at location B on January 1st an array of cameras?

A. I think I've already answered that. But, you know, it depends on the application….

Lubin Dep. (Dkt. 112-4) at 179:18–23

As The *Microsoft* Court Already Held, The Relationship Between Cameras In The Array Is Determined Before Image Capture



UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

KEWAZINGA CORP.,

Plaintiff,

-v-

MICROSOFT CORPORATION,

Defendant.

1:18-cv-4500 (GHW)

CLAIM CONSTRUCTION OPINION

GREGORY H. WOODS, United States District Judge:

Microsoft Opinion

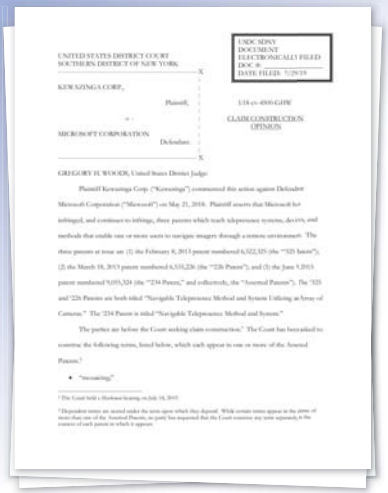
Br. at 14-15. In all of the multitude of configurations contemplated in the patents, however, the cameras in each array are always fixed in geometric relation to each other. As discussed below, the fixed geometric relationship between the cameras within an array is crucial to permitting users to navigate the environment captured by that array.

Microsoft Opinion at 28

to each other. As discussed above, the cameras are carefully deployed to create the necessary fields of view. Were that not the case, a user, let alone multiple independent users, might not be able to navigate through the environment utilizing the array. Accordingly, a POSITA would understand that cameras that did not have "fixed" fields of view relative to the other cameras in the array would be contrary to the teachings of the '325 and '226 Patents. In this context,

Microsoft Opinion at 34

The *Microsoft* Court Rejected The Same Arguments



Microsoft Opinion

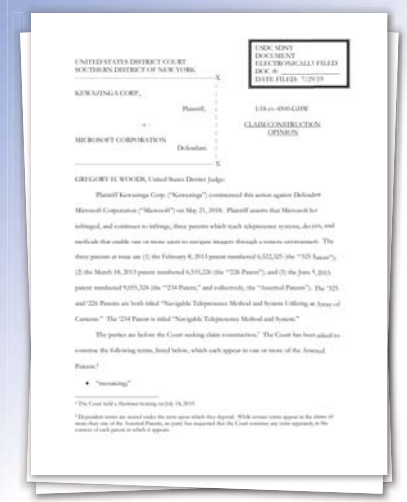
On the other hand, Plaintiff's contention that the cameras can be moved or reused also goes too far and lacks intrinsic support. A careful review of the various configurations of "arrays of cameras" contemplated in the Asserted Patents provided reveals that there is not one single example in the intrinsic evidence of an array of cameras in which the cameras are not fixed relative to each other. As discussed above, the cameras are carefully deployed to create the necessary

Microsoft Opinion at 33-34

Plaintiff's contention that cameras within an array can be reused is also rejected as overbroad. It is true that, from the perspective of a user of one of the claimed telepresence systems, a camera in an array may be reused in certain applications. For example, hypothetically, the user could navigate from camera A to camera B, and then back to camera A within the scope of the claimed inventions. However, if, in the example represented by Figure 11 above, a camera in array 12-1 were reused in array 12-2, array 12-1 and array 12-2 would still constitute separate and distinct arrays. Accordingly, the contention that a camera can be reused within an array as proposed by Plaintiff rejected as overbroad and likely to cause juror confusion.

Microsoft Opinion at 34

As The *Microsoft* Court Already Held, The Relationship Between Cameras In The Array Is Determined Before Image Capture



Microsoft Opinion

perspective from camera to camera. Rather than relying, per se, on physically moving a microcamera through space, the system uses the multiplicity of positioned microcameras to move the viewer's perspective from microcamera node to adjacent microcamera node in a way that provides the viewer with a sequential visual and acoustical path throughout the extent of the array. This allows the viewer to fluidly

'226 Patent at 4:12–18

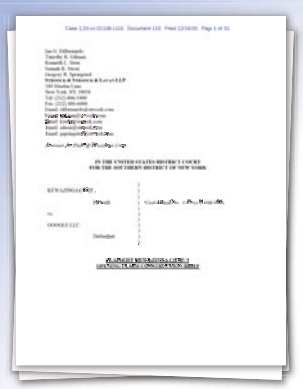
It is to be understood that the array **10** provides several advantages. For example, because the array **10** employs a series of cameras **14**, no individual camera, or the entire array **10** for that matter, need be moved in order to obtain a seamless view of the environment. Instead, the user navigates through the array **10**, which is strategically placed through and around the physical environment to be viewed.

'226 Patent at 6:26–32

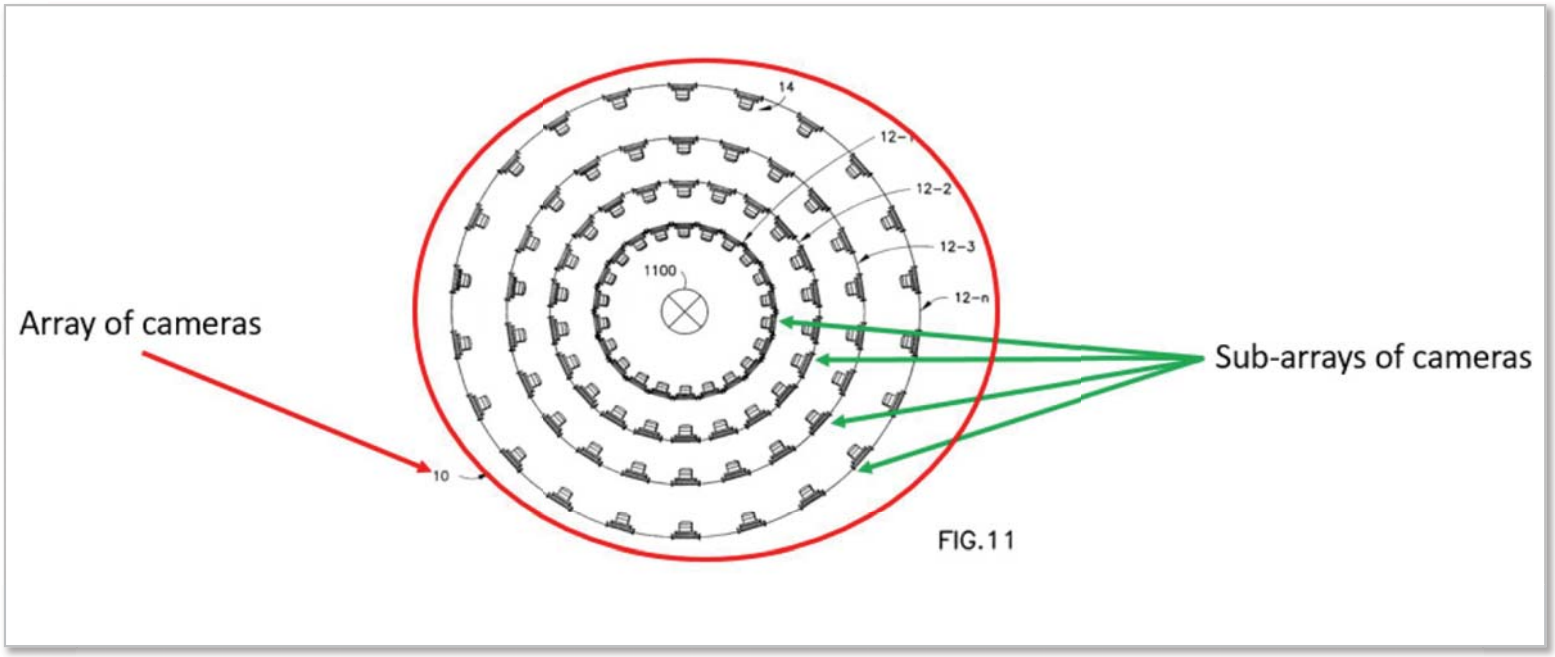
Kewazinga's "Created Over Time By Moving Cameras" Construction Lacks Intrinsic Support

- There is not a single claim, description, or embodiment anywhere in the intrinsic evidence disclosing an "array of cameras" that can be created over time by moving cameras.
- Instead, as the *Microsoft* court has already found, the patents consistently describe an "array of cameras" as multiple cameras in fixed relation to each other.
- That is because an "array of cameras" is a structural limitation of the claims, not an abstract concept that can be formed over time.

Kewazinga Attempts To Rewrite The Patent



Kewazinga Opening Claim Construction Brief



Brief at 10

Figure 11 Discloses A System With Multiple Arrays, Not A Single Array Created Over Time

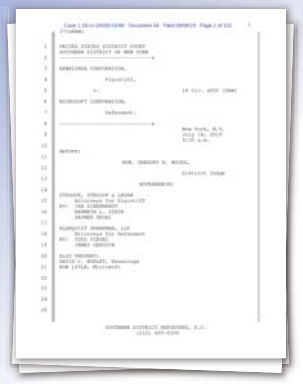
Google's Evidence

- *Microsoft* Court held that Figure 11 depicts multiple arrays
- '325 specification describes Figure 11 in section called "Multiple Arrays"
- '325 specification repeatedly describes Figure 11 as depicting "arrays" (plural)
- Claim 22 of '325 Patent, which claims the Figure 11 embodiment, refers to a plurality of arrays
- '226 patent, which also recites "array of cameras" in all claims, lacks Figure 11

Kewazinga's Evidence

- Disfavored expert testimony
- '325 Patent's passing reference to "10" and "continuing reference to Figure 1"

The *Microsoft* Court Specifically Rejected This Argument



Kewazinga v. Microsoft

Claim Construction Hearing Transcript

(18-cv-4500-GHW, Dkt. 54)

> THE COURT: Can I ask, is there any one example of moving cameras within an array, as opposed to moving an array?

Transcript at 11:20–21

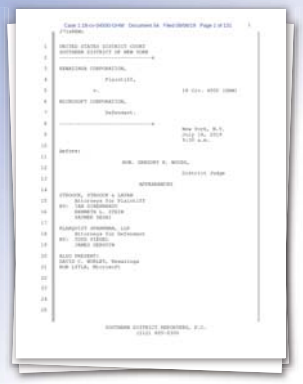
> we go to the next slide, 19. The embodiment of figure 11. Cameras are moving during the capture process. This embodiment

Transcript at 13:12–13 (Argument by Kewazinga's counsel)

> How does that happen? By moving cameras. The ring in the center is there first. Images are taken and stored. That is moved away. Next, the cameras in the second ring are moved into place, images captured, that ring is then taken away. The third ring is moved into place, images are captured, and so on until you're done.

Transcript at 14:3–8 (Argument by Kewazinga's counsel)

The *Microsoft* Court Specifically Rejected Kewazinga's Fig. 11 Argument



Kewazinga v. Microsoft

Claim Construction Hearing Transcript

(18-cv-4500-GHW, Dkt. 54)

THE COURT: Thank you.

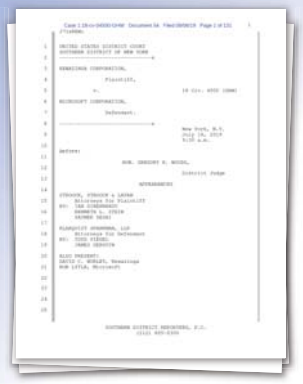
Counsel, each of the cylinders described here, as identified with a separate designator, 12-1 through 12-n, does that say anything about whether or not each of these rings constitutes a separate array of cameras as opposed to the collection constituting an array of cameras?

Transcript at 14:14–19

MR. DIBERNARDU: The collection 12 can be the array and, in fact, there is specific language in the patent that says that.

Transcript at 14:20–22

The *Microsoft* Court Specifically Rejected Kewazinga's Fig. 11 Argument



Kewazinga v. Microsoft

Claim Construction Hearing Transcript

(18-cv-4500-GHW, Dkt. 54)

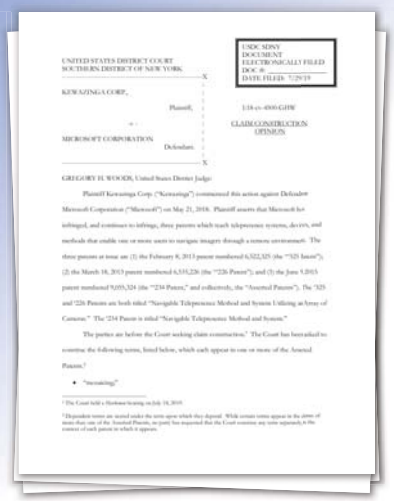
THE COURT: I'm sorry. To bring you back to the language you pointed me to earlier in 1913. The following sentence describes, it says the following, "This also allows each camera in each array 12 to have an associated unique storage node."

Is that consistent with what I understand to be your construction that array 12 constitutes the entirety of all of the series of rings as opposed to each of the separate concentric rings constituting an array?

MR. DIBERNARDU: I think the patent contemplates either, your Honor. It is not material to the navigation. Certainly it contemplates the array being 12, the collection, the plurality of rings, and in some embodiments an individual ring may be considered the array.

Transcript at 17:1–14

The *Microsoft* Court Held That Figure 11 Describes Multiple Arrays



Microsoft Opinion

Patents, each array contains cameras in fixed in relation to each other. The supplemental arrays, containing cameras in different geometric relationships with each other than in the initial array, are described as distinct from the first array and each other (i.e. array 12-1, array 12-2, array 12-n+1).

From this, a POSITA would understand that the supplemental arrays are distinct and separate arrays because their constituent cameras do not have the same fixed geometric relationship as the cameras in the other arrays. This is the case even if after the removal of array 12-1, as pictured in Figure 11, the same cameras which were used in array 12-1 were repurposed to create array 12-2. Even in the event that arrays 12-1 and 12-2 utilized the same physical cameras, the geometric relationship between the cameras in arrays 12-1 and 12-2 are different, and so a POSITA would understood them to be different arrays.[18]

Microsoft Opinion at 32

Figure 11 Discloses Multiple Arrays–Not One Array Created Over Time

'325 Patent

Multiple Arrays

In certain applications, a user may also wish to navigate forward and backward through the environment, thereby moving closer to or further away from an object. Although it is within the scope of the present invention to use cameras with zoom capability, simply zooming towards an object does not change the user's image point perspective. One such embodiment in which users can move dimensionally forward and backward through the environment with a changing image point perspective will now be described with respect to FIG. **11** and continuing reference to FIG. **1**. As will be understood by those skilled in the art, the arrays described with reference to FIG. **11** may be used with any server, storage device and user terminals described herein.

FIG. **11** illustrates a top plan view of another embodiment enabling the user to move left, right, up, down, forward or backwards through the environment. A plurality of cylindrical arrays (**121-1**–**121**-n) of differing diameters comprising a series of cameras **14** may be situated around an environment comprising one or more objects **1200**, one cylindrical array at a time. Cameras **14** situated around the object(s) **1100** are positioned along an X and Z coordinate system. Accordingly, an array **12** may comprise a plurality of rings of the same circumference positioned at different positions (heights) throughout the z-axis to form a cylinder of cameras **14** around the object(s) **1100**. This also allows each camera in each array **12** to have an associated, unique storage node address comprising an X and Z coordinate—i.e., arrayl(X, Z). In the present embodiment, for example, a coordinate value corresponding to an axis of a particular camera represents the number of camera positions along that axis the particular camera is displaced from a reference camera. In the present embodiment, from the user's perspective, the X axis runs around the perimeter of an array **12**, and the Z axis runs down and up. Each storage node is associated with a camera view identified by its X, Z coordinate.

'325 Patent at 18:57–19:26

As will be understood by those skilled in the art, the arrays described with reference to FIG. **11** may be used with any server, storage device and user terminals described herein.

Figure 11 Discloses Multiple Arrays–Not One Array Created Over Time

'325 Patent

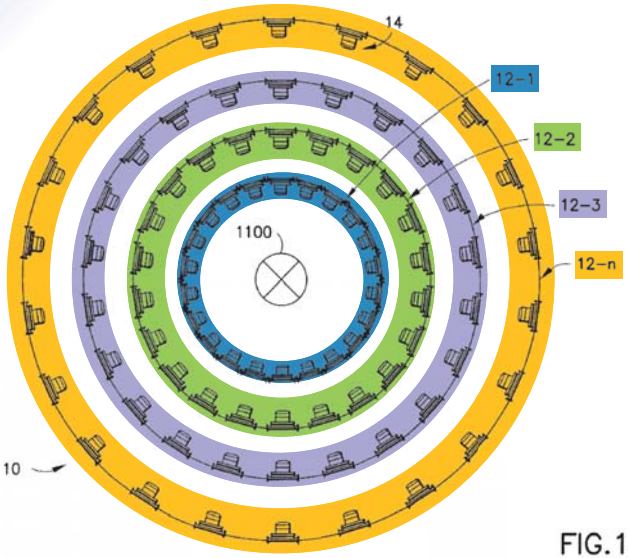


FIG. 11

FIG. **11** illustrates a top plan view of another embodiment enabling the user to move left, right, up, down, forward or backwards through the environment. A plurality of cylindrical arrays (**121-1**–**121**-n) of differing diameters comprising a series of cameras **14** may be situated around an environment comprising one or more objects **1200**, one cylindrical array at a time. Cameras **14** situated around the object(s)

'325 Patent at 19:5–11

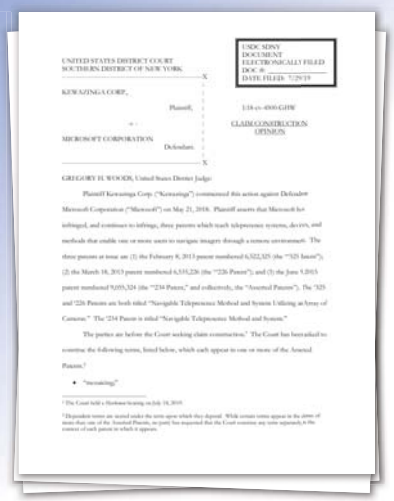
Upon storing all of the outputs associated with the arrays **12-1** through **12**-n, a user may navigate through the envi-

'325 Patent at 19:64–65

0) of $Array_3$. The user may move directly forward, and therefore closer to the object **1100**, by accessing the image stored in $Array_2(0, 0)$ and then $Array_1(0, 0)$. To move further away from the object and to the right and up, the user may move from the image stored in node address $Array_1(0, 0)$ and access the images stored in node address $Array_2(1, 1)$, followed by accessing the image stored in node address $Array_3(2, 2)$, an so on. A user may, of course, move among

'325 Patent at 20:9–16

The *Microsoft* Court Held That Figure 11 Describes Multiple Arrays

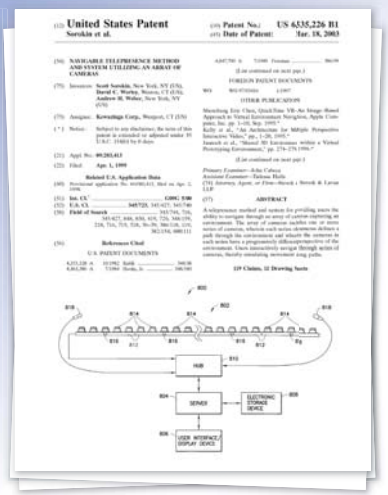


Microsoft Opinion

The system represented by Figure 11 is taught in Claim 22 of the '325 Patent, which further emphasizes that arrays with different geometric relationships between the constituent cameras are to be considered separate arrays. Claim 22 teaches a teaches telepresence system involving "a plurality of removable arrays" deployed at "different lengths" from the environment, which parallels the system discussed above and represented in Figure 11. The use of plural "arrays" is notable in Claim 22, as it is a departure from the more typical and singular phrase "an array of cameras" used elsewhere in the claims. *E.g.* '325 Patent, Claim 1, 4, 10, 13. The use of plural "arrays" in Claim 22 highlights the requirement that the cameras in the array are fixed in relation to each other by emphasizing that when, as in Figure 11, the geometric relationship between the constituent cameras with an array changes, a new array is created. For all these

Microsoft Opinion at 32–33

Kewazinga's Reliance On Figure 11 Is Misplaced



'226 Patent

No Figure 11

54. A method of providing users with views of a remote environment, the method comprising:

receiving electronic images of the environment captured from an array of cameras, the array including at least a first series of cameras defining a first path through the environment, the first series of cameras having progressively different perspectives of the environment along the first path;

receiving a first input from a first user interface device associated with a first user, the first input indicating movement through the environment along the first path;

providing to the first user images from the first series of cameras in sequence along the first path, thereby simulating movement by the first user through the environment along the first path.

'226 Patent, Claim 54

- Figure 11 was not added until October 1999, six months after the '226 patent claims (all of which recite "array of cameras") were first filed
- Figure 11 cannot support Kewazinga's broad construction of "array of cameras," which both sides agree means the same thing in the '226 and '325 patents.

Figure 11 Discloses A System With Multiple Arrays, Not A Single Array Created Over Time

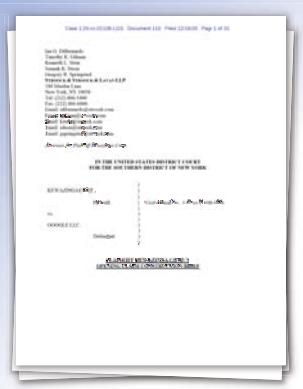
Google's Evidence

- *Microsoft* Court held that Figure 11 depicts multiple arrays
- '325 specification describes Figure 11 in section called "Multiple Arrays"
- '325 specification repeatedly describes Figure 11 as depicting "arrays" (plural)
- Claim 22 of '325 Patent, which claims the Figure 11 embodiment, refers to a plurality of arrays
- '226 patent, which also recites "array of cameras" in all claims, lacks Figure 11

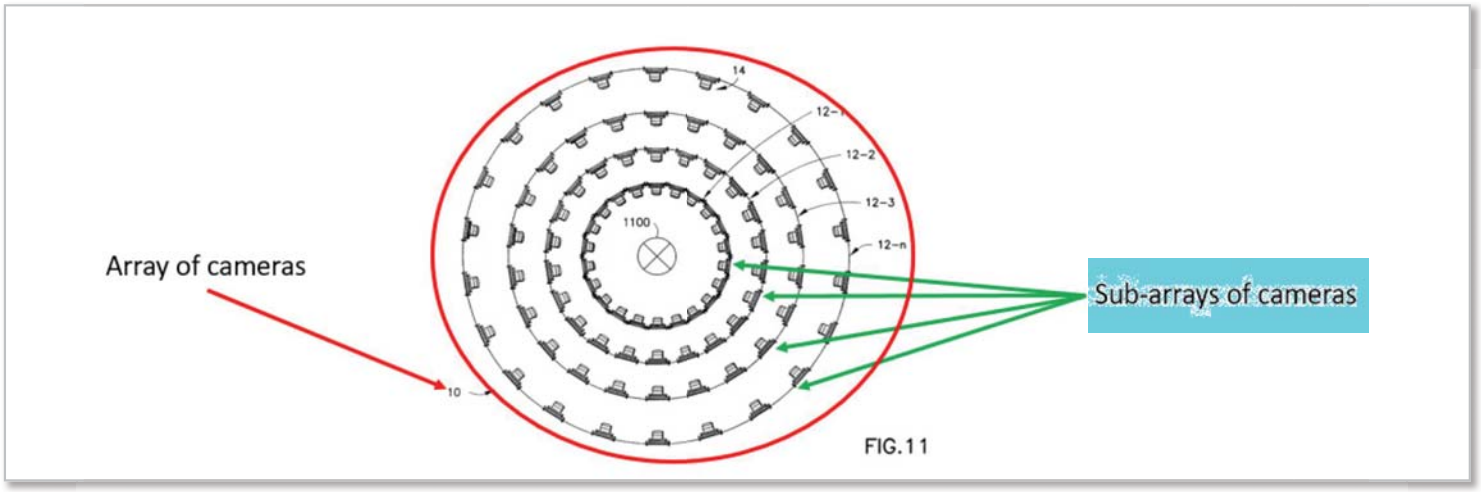
Kewazinga's Evidence

- Disfavored expert testimony
- '325 Patent's passing reference to "10" and "continuing reference to Figure 1"

Kewazinga's Expert Attempts To Rewrite The Patent Disclosures



Kewazinga Opening Claim Construction Brief



Brief at 10

Jeffrey Lubin

Q. Does the word "subarrays" appear in any of the asserted patents?
A. I don't believe so.

Q. The patents never refer to 12-1, 12-2, 12-n as subarrays, right?
A. That's correct.

Lubin Dep. (Dkt. 112-4) at 148:13–15, 160:14–17

Expert Testimony Is Properly Discounted When It Contradicts The Intrinsic Record

"[A] court should discount any expert testimony 'that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, the written record of the patent.'"

Phillips v. AWH Corp.,
415 F.3d 1303, 1318 (Fed. Cir. 2005)

Dr. Lubin Is Not A Qualified Expert Under Kewazinga's Own Definition

Jeffrey Lubin

Kewazinga Expert

Q. Do you have a bachelor's degree in computer science?

A. No, I don't.

. . .

Q. Just for the record, do you have a postgraduate degree in computer science?

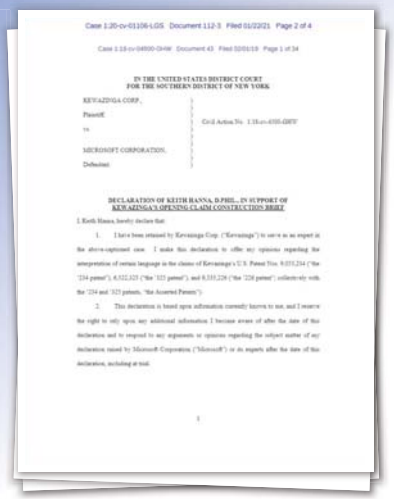
A. No.

Q. Do you have a postgraduate degree in computer engineering?

A. No.

Lubin Dep. (Dkt. 112-4) at 46:16–18, 47:23–48:5

Kewazinga's Own Definition Of The Level Of Ordinary Skill Includes A Degree In Computer Science

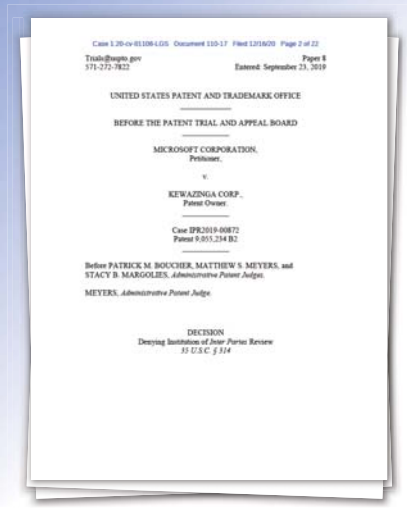


Declaration of Keith Hanna in *Microsoft*

23. Based on my experience, it is my opinion that a person of ordinary skill in the art of the Asserted Patents at the time each was filed would have a bachelor's degree in computer science, computer engineering or the equivalent, and 3-5 years of experience in the field of computer vision or image processing, or a post-graduate degree in computer science, computer engineering or the equivalent, and 1-2 years of experience in the field of compter vision or image processing, or equivalent experience.

Hanna Decl. ¶ 23 (DI 112-3 at ¶ 23)

Kewazinga's Own Definition Of The Level Of Ordinary Skill Includes A Degree In Computer Science



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

KEWAZINGA CORP.,
Patent Owner.

Case IPR2019-00872
Patent 9,055,234 B2

Before PATRICK M. BOUCHER, MATTHEW S. MEYERS, and STACY B. MARGOLIES, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

Microsoft IPR

B. Level of Ordinary Skill in the Art

Petitioner does not propose a level of ordinary skill in the art in the Petition. *See generally* Pet. However, regarding the level of ordinary skill in the art, Petitioner's declarant, Dr. Stevenson, proposes:

> a [person of ordinary skill in the art] to which these applications are directed would have had a bachelor's degree in computer science, computer engineering or the equivalent, and 3–5 years of experience in the field of computer vision or image processing, or a post-graduate degree in computer science, computer engineering or the equivalent, and 1–2 years of experience in the field of computer vision or image processing, or equivalent experience.

Ex. 1005 ¶ 30.

[Kewazinga]

In response, Patent Owner asserts that its declarant, Dr. Hanna, "agrees that this was the level of ordinary skill in the art at the time the 1999 Application was filed." Prelim. Resp. 9 (citing Ex. 2001 ¶ 22); *see also* Ex. 2001 ¶ 22.

Microsoft IPR at 7–8 (see attached, DI 110-17 at 7-8; annotation added)

Figure 11 Discloses Multiple Arrays–Not One Array

'325 Patent

- Kewazinga argues that because Figure 11 is described with "continuing reference to Figure 1" and "array 10," Figure 11 depicts a single array created over time.
- It does not–in fact, Figure 1 describes that "array 10" **does not move**, and is instead "strategically placed" in the environment in advance.

As shown in FIG. **1**, each user **22** may be coupled to the server **18** by an independent communication link. Furthermore, each communication link may employ different technology. For example, in alternate embodiments, the communication links include an internet link, a microwave signal link, a satellite link, a cable link, a fiber optic link, a wireless link, and the like.

It is to be understood that the array **10** provides several advantages. For example, because the array **10** employs a series of cameras **14**, no individual camera, or the entire array **10** for that matter, need be moved in order to obtain a seamless view of the environment. Instead, the user navigates through the array **10**, which is strategically placed through and around the physical environment to be viewed.

'325 Patent at 6:30–43

Claim Construction Disputes

"array of cameras"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

(Slides 14–52)

"mosaicing"

'325 Patent, claims 1, 5, 6

(Slides 53–65)

"mosaicing"

'325 Patent, claims 1, 5, 6

1. A telepresence system for providing a first user with a first display of an environment and a second user with a second display of the environment, the system comprising:

an array of cameras, each camera having an associated view of the environment and an associated camera output representing the associated view, the array including at least one camera path wherein each path is defined by a series of cameras having progressively different perspectives of the environment;

a first user interface device associated with the first user having first user inputs associated with movement along a first path in the array;

a second user interface device associated with the second user having second user inputs associated with movement along a second path in the array;

at least one processing element coupled to the user interface devices for receiving user inputs, the processing element configured to:

interpret received first user inputs and select outputs of cameras in the first path, mix the outputs of cameras in the first path in accordance with the received first user inputs by sequentially mosaicing the selected outputs of cameras in the first path and

interpret received second inputs and select outputs of cameras in the second path independently of the first inputs, mix the outputs of cameras in the second path in accordance with the received second user inputs by sequentially mosaicing the selected outputs of cameras in the second path, thereby allowing the first user and second user to navigate simultaneously and independently through the array.

'325 Patent, Claim 1

interpret received second inputs and select outputs of cameras in the second path independently of the first inputs, mix the outputs of cameras in the second path in accordance with the received second user inputs by sequentially mosaicing the selected outputs of cameras in the second path, thereby allowing the first user and second user to navigate simultaneously and independently through the array.

"mosaicing"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

Google

Proposed constructions

"creating imagery assembled from a plurality of camera outputs, or portions thereof, including an alignment process and a composition process to achieve a seamless combination of the camera outputs"

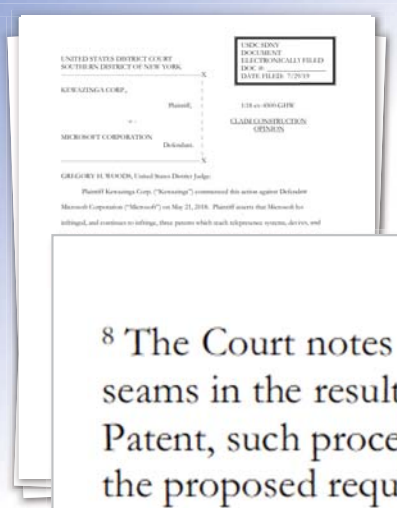
Kewazinga

"creating imagery assembled from a plurality of images, or portions thereof, including an alignment process and a composition process"

Microsoft Court's Construction

"creating imagery assembled from a plurality of images, or portions thereof, including an alignment process and a composition process"

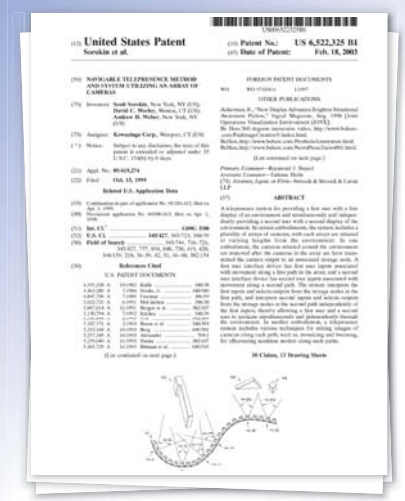
The *Microsoft* Court Did Not Decide The Dispute At Issue Here



[8] The Court notes that the "mosaicing" process taught by the Burt Patent includes image processing aimed at reducing seams in the resulting image. The Court further understands that in the methods and systems taught by the Burt Patent, such processing takes place during the "composition" process. For the reasons above, the Court has rejected the proposed requirement that "mosaicing" must result in a seamless image. In the event that the presence or absence of image processing aimed at reducing seams in "mosaiced" images proves to be pertinent to any claim or defense in this case, the Court will consider supplemental briefing as to the meaning of the term "composition process."

Microsoft Opinion at 17 fn 8

"Mosaicing," As Described In The Patents, Includes An Attempt To Achieve A Seamless Combination Of Camera Outputs



'325 Patent

the environment. In another embodiment, a telepresence system includes various techniques for mixing images of cameras along each path, such as, mosaicing and tweening, for effectuating seamless motion along such paths.

'325 Patent Abstract

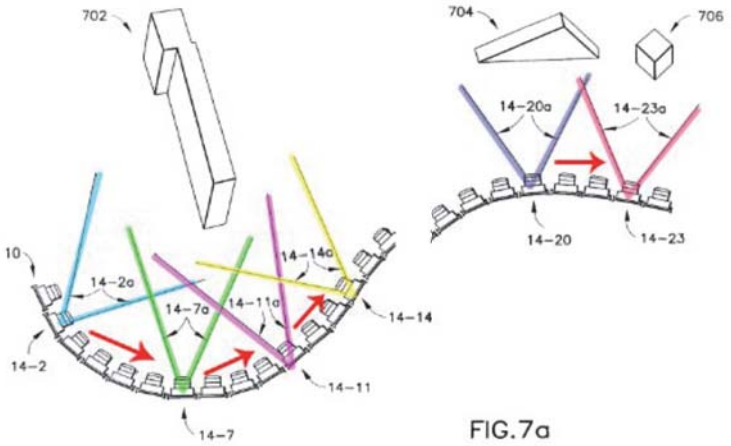
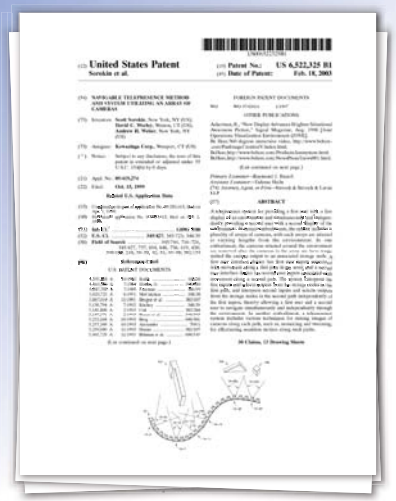


FIG.7a

'325 Patent Figs. 7a, 7b-7g (modified and annotated) (showing the views from exemplar cameras).

Google Reply Brief at 19

"Mosaicing," As Described In The Patents, Includes An Attempt To Achieve A Seamless Combination Of Camera Outputs

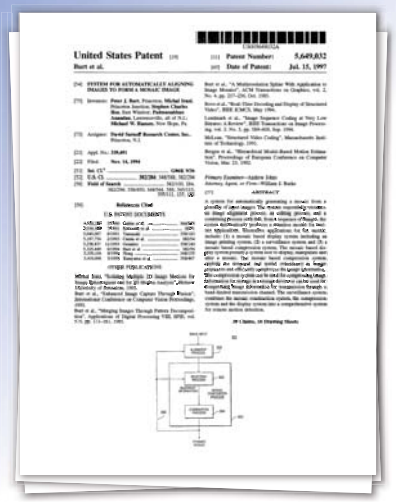


'325 Patent

In another embodiment, mixing may be accomplished by "mosaicing" the outputs of the intermediate cameras **14**. U.S. Pat. No. 5,649,032 entitled System For Automatically Aligning Images To Form A Mosaic Image to Peter J. Burt et al. discloses a system and method for generating a mosaic from a plurality of images and is hereby incorporated by reference. The server **18** automatically aligns one camera output to another camera output, a camera output to another mosaic (generated from previously occurring camera output) such that the output can be added to the mosaic, or an existing mosaic to a camera output.

'325 Patent at 13:15–25

"Mosaicing," As Described In The Patents, Includes An Attempt To Achieve A Seamless Combination Of Camera Outputs


United States Patent [19]

Burt et al.

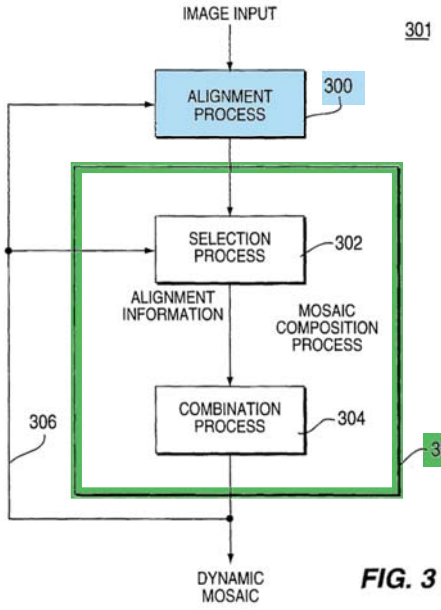
[11] Patent Number: 5,649,032

[45] Date of Patent: Jul. 15, 1997

'032 Burt Patent

FIG. 3 depicts a flow chart of the operation of a dynamic mosaic construction system **301**. The system contains two sequentially executed processes; namely, an image alignment process **300** and a mosaic composition process **303**.

Burt Patent ('032 Patent) at 5:44–47 (Dkt. 110-7)



Composition process

FIG. 3

"Mosaicing," As Described In The Patents, Includes An Attempt To Achieve A Seamless Combination Of Camera Outputs

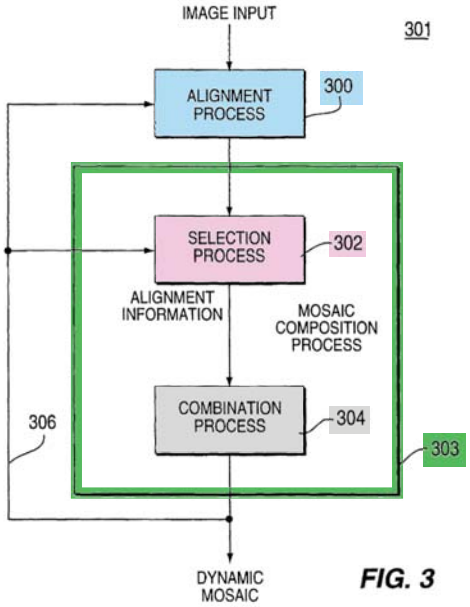


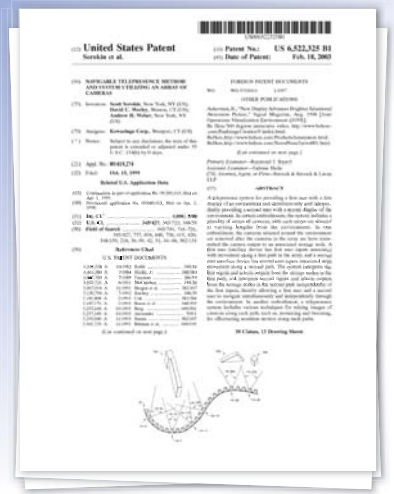
FIG. 3

'032 Burt Patent, Fig. 3

Once the alignment process is complete, the invention utilizes a mosaic composition process to construct (or update) a mosaic. The mosaic composition process contains two processes: a selection process and a combination process. The selection process automatically selects images for incorporation into the mosaic and may include masking and cropping functions. Once the selection process selects which image(s), or portions thereof, are to be included in the mosaic, the combination process combines the various images to form the mosaic. The combination process applies various image processing techniques, such as merging, fusing, filtering, image enhancement, and the like, to achieve a seamless combination of the images. The resulting mosaic is a smooth image that combines the constituent images such that temporal and spatial information redundancy are minimized in the mosaic.

Burt Patent ('032 Patent) at 2:26–41 (Dkt. 110-7)

"Mosaicing," As Described In The Patents, Includes An Attempt To Achieve A Seamless Combination Of Camera Outputs



'325 Patent

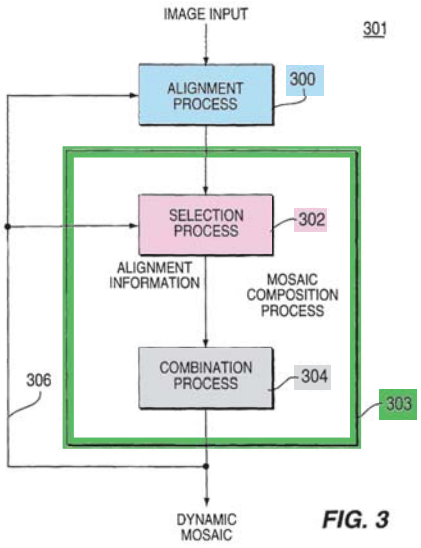


FIG. 3

'032 Burt Patent, Fig. 3

Once the mosaic alignment is complete, the present embodiment utilizes a mosaic composition process to construct (or update) a mosaic. The mosaic composition comprises a selection process and a combination process. The selection process automatically selects outputs for incorporation into the mosaic and may include masking and cropping functions to select the region of interest in a mosaic. Once the selection process selects which output(s) are to be included in the mosaic, the combination process combines the various outputs to form the mosaic. The combination process applies various output processing techniques, such as merging, fusing, filtering, output enhancement, and the like, to achieve a seamless combination of the outputs. The resulting mosaic is a smooth view that combines the constituent outputs such that temporal and spatial information redundancy are minimized in the mosaic. In one embodi-

'325 Patent at 13:26–32

"mosaicing"

'226 Patent, claims 55, 119; '325 Patent, claims 1, 5, 6, 10, 14, 15, 29

Google

"creating imagery assembled from a plurality of camera outputs, or portions thereof, including an alignment process and a composition process to achieve a seamless combination of the camera outputs"

Proposed constructions

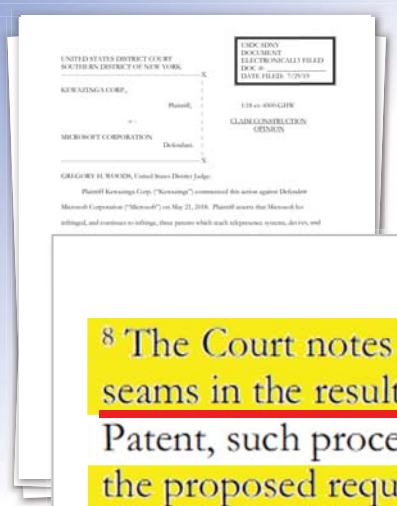
Kewazinga

"creating imagery assembled from a plurality of images, or portions thereof, including an alignment process and a composition process"

Microsoft Court's Construction

"creating imagery assembled from a plurality of images, or portions thereof, including an alignment process and a composition process"

The *Microsoft* Court Withheld Deciding This Issue



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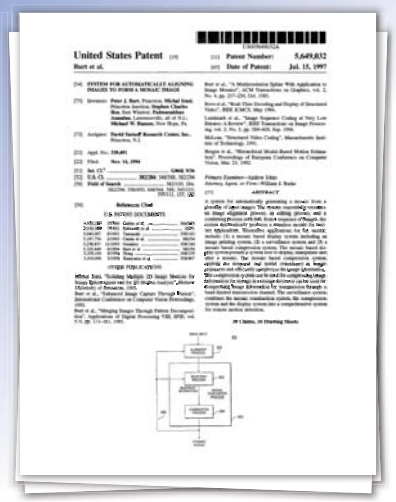
Microsoft Opinion at 17 fn 8

The Passage Kewazinga Relies On Is Describing The Prior Art, Not The "Mosaicing" Of The Burt Patent


United States Patent [19]
Burt et al.

[11] Patent Number: 5,649,032
[45] Date of Patent: Jul. 15, 1997

'032 Burt Patent

2. Description of the Prior Art

. . .

mations. After processing, the individual images are combined to form a mosaic, i.e., an image that contains a plurality of individual images. Additional image processing is performed on the mosaic to ensure that the seams between the images are invisible such that the mosaic looks like a single large image. The alignment of the images and the

Burt Patent ('032 Patent) at 1:14, 20–25
(Dkt. 110-7)

Google's Construction Is Consistent Grammatically And With The Claims

Google	Proposed constructions	Kewazinga
"creating imagery assembled from a plurality of camera outputs, or portions thereof, including an alignment process and a composition process to achieve a seamless combination of the camera outputs"		"creating imagery assembled from a plurality of images, or portions thereof, including an alignment process and a composition process"

interpret received second inputs and select outputs of cameras in the second path independently of the first inputs, mix the outputs of cameras in the second path in accordance with the received second user inputs by sequentially mosaicing the selected outputs of cameras in the second path, thereby allowing the first user and second user to navigate simultaneously and independently through the array.

'325 Patent, Claim 1